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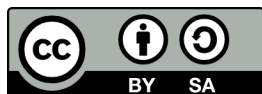
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Challenges and Opportunities in the Implementation of School-Based Teacher Professional Development: A Case from Kenya

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Abstract: This study investigated how a school-based professional development programme, designed by the Headteacher and staff of a Kenyan primary school, and delivered by a Teacher Education in Sub-Saharan Africa (TESSA) team, supported teacher learning and growth. The TESSA team observed teaching in the classroom before the implementation of the school-based teacher professional programme. This was followed by the training of the teachers in the school. The TESSA team did an evaluation of the school-based training programme through classroom observation, an interview schedule and a teacher questionnaire. The evaluations were done three months and one year, respectively, after the school-based training. The findings indicate that teachers experienced professional growth through collaborative learning with colleagues, used a greater range of approaches and learned to self-reflect on their classes with more use of active learning. Teachers made productive use of textbooks as well as accessing and using TESSA OER in teaching.

Keywords: school-based teacher professional development, open educational resources, TESSA.

Introduction

Education and training policy addresses quality and efficiency as major issues in the development of a country's educational system. The objective of any education system is to provide quality education and training that would give learners opportunities for lifelong learning and meaningful participation in society as productive citizens. Teacher development, advancement in a teaching career and the availability of quality resources, among others, are essential factors in achieving this objective (Plessis, 2013; Park & So, 2014).

Highly effective teachers improve students' academic learning in the short-term and long-term quality of life. In addition, the quality of teachers in any school setting is claimed to be the most critical component for improving student achievement (Gichuru & Ongus, 2016; Fenster, 2014).

In Sub-Saharan Africa and especially in Kenya, academic achievement in primary schools has been low (Bold, et al, 2017; Government of Kenya, 2014). This low achievement has been confounded by overcrowded classrooms and a shortage of qualified teachers. Furthermore, teaching and learning is changing to keep up with the rapid developments and changes in education and digital technologies. Teachers are therefore expected to continuously develop and improve their professional



qualifications. To address the professional teacher qualification some countries have embarked on traditional teacher professional development. (Shohel & Banks, 2012).

Traditional teacher professional development can be provided in various ways such as pre-service training and orientation for new staff, in-service training, work-based training, seminars, and mentoring programmes, among others. However, traditional professional development courses are not addressing the needs and interests of the learner as well as those of society (Darling-Hammond et al., 2017). It is also taking a long time for opportunities afforded by ICT and OER to make an impact. This study describes and evaluates a bespoke, school-based, professional development programme, designed by the headteacher and staff of a Kenyan primary school, and delivered by the TESSA team. This school-based, professional development programme may help in retooling teachers to support the implementation of the new Kenyan competence-based curriculum. The curriculum is said to provide flexible education pathways for identifying and nurturing the talents and interests of learners to prepare them for the world of work. The curriculum ensures that all learning is contextually relevant for the learner's holistic growth and development (Republic of Kenya, 2017). Kenyan teachers need to revitalize their professional growth to ensure they are flexible in adapting to this curriculum. School-based professional development is, therefore, a timely intervention.

TESSA is a programme of activities designed to support teachers and teacher educators in developing more participatory approaches to teaching (Anamuah-Mensah et al., 2013; Moon, 2010; Wolfenden et al., 2010). TESSA has a resource bank of 75 units of work, published in 2008 as Open Educational Resources (OER) based on the primary school curriculum, and versioned for different African countries. Through the provision of contextualized examples of classroom practice TESSA OER provide support for teachers in developing more active approaches to learning and provide a basis for collaboration. Through discussion and reflection, teachers can adapt the examples to suit their context. The TESSA units and ideas in them underpinned this school-based professional development programme.

This study focused on a public primary school in Kenya with a population of 868 pupils and 20 teachers. The TESSA OER were introduced in the school in the year 2011 by teachers who were trained using TESSA activities in the in-service teacher training programme in Egerton University. Before the introduction of TESSA in the primary school, teachers mainly used strategies which made learner interactions with one another and the teacher minimal. The learners sat in rows facing the chalk board with the teacher in front. This encouraged passivity, low motivation to learn and absenteeism among learners was common. However, the introduction of TESSA OER encouraged working in groups, which offered an opportunity for discussions and more use of local resources to support learning. The school performance in the Kenyan Certificate of Primary Examinations improved, as shown in Figure 1.

Five years on however, the paper copies of the TESSA OER the teachers were using had disintegrated and some of the impetus was lost. Teachers who had subsequently joined the school, were not aware of the advantages that TESSA OER could bring and some of the original advocates had left. Working with the head teacher and her staff, a school-based professional development programme was conceived, with the aim of running a training which would not disrupt normal teaching.

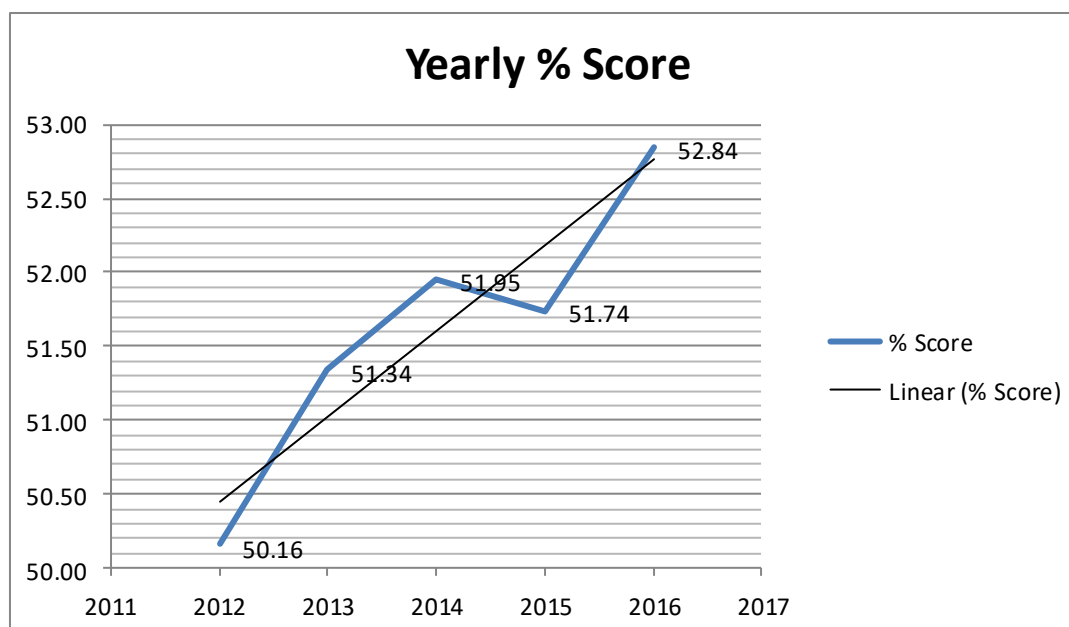


Figure 1. Performance in Kenya Certificate of Primary Examinations.

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Objectives of the Study

The purpose of this study was to identify the achievements and challenges observed during the implementation of school-based, professional development programmes in a Kenyan primary school. The specific objectives were to:

- identify school teacher perceptions of the new school-based teacher professional development programme
- find out how teachers engaged with TESSA OER and what challenges were encountered.

Methodology

This is a small-scale, qualitative study that describes an intervention in a primary school where TESSA was known but was no longer being used. The focus was to design a sustainable School Based Professional Development, which would help teachers to develop more participatory approaches to learning and teaching and learn how to use the TESSA OER to support their work in the future.

The 13 teachers in the school who participated in the intervention were grouped according to broad subject areas, namely, science and mathematics, languages and social studies. Over two days the TESSA team facilitators ran two-hour sessions focusing on pair and group work. These sessions took place after school. Teachers were encouraged to work in pairs and try out TESSA activities for a month.

The facilitators returned for another two days during which teachers reported on their progress and were further supported in planning, in particular, on how to make use of the textbooks and TESSA OER in pair and group work. Teachers were encouraged to continue using their acquired skills and support each other in their respective groups and reflect on their teaching. The TESSA team visited the school after three months to assess how the teachers were implementing their acquired skills. This was followed by another visit after one year. Data were collected during the visits, using questionnaires, classroom observations, an interview schedule, a school walk-around and document analysis on school attendance, and continuous assessment tests performance. Data was analyzed as per the objectives that underpinned the study.

Results and Discussion

There were 13 of the 20 teachers who attended the training and continued to use the acquired skills and TESSA OER. Classroom observation indicated that even the teachers who did not attend the training were using TESSA OER and learner centered approaches. This is an indicator that the content of the training was shared through collaboration and guiding each other in their subject areas towards appropriate TESSA units. An interview with the Headteacher was in agreement with what was observed. To enhance teamwork the teachers of specific subjects prepared schemes of work during the school break and embedded TESSA OER then shared with all the teachers. Furthermore, the teachers used the TESSA subject resources to support teachers in planning lessons.

Many teachers had come across TESSA OER but were daunted by the volume of material and had not really been able to make sense of them. However, the training held after school helped them to appreciate the benefits and provided an opportunity to work together. The Headteacher supported the work by creating a noticeboard in the staffroom for teachers to share ideas, and encouraged the teachers to concentrate on helping each other to use TESSA sections which are relevant to their subject.

Perceptions of teachers on school-based teacher professional development programme

The 13 participating teachers, as they reflected on their practice, found the school-based teacher professional development programme to be very helpful. The teachers were able to work out problems and dilemmas encountered in classroom through collaborating with each other. This was evidenced by the fact that they opened up their classroom for observation and had a candid discussion with their peers. The programme helped to build positive engagement with learners, discover the environment and make use of materials that are beneficial in enhancing learning, thereby, making teaching easier.

A classroom observation of a Grade Two class showed the teacher encouraging her pupils to work and talk together. She made a start with pair work by giving instructions for pupils to work together when doing a small multiplication task using sticks as concrete resources. These pupils effectively carried out their pair tasks. Other observations indicated pupils actively participated in discussions and all pupils were engaged with feedback. In addition, teachers were able to find TESSA units that fitted in well with the text book syllabus and were using ideas from both the TESSA unit and the text book. This eventually helped learners develop interest, attend class and be willing to assist each other, resulting in improved performance. The TESSA approach helped learners to think critically. As one of the respondents (Teacher A) said:

Use of varied teaching approaches in TESSA resources has developed critical thinking and problem solving in learners and teachers' educational activities leading to improved performance.

Teachers perceived that use of TESSA resources and learner centered methods encouraged learner participation in class, and motivated and improved self-esteem as the respondent Teacher B indicated:

Group activities ensure that everybody participates in the learning process thus encouraging all to contribute. TESSA resources help the teacher and the learner to explore the local community and together they discover new ideas that enhance learning.

Teachers felt that their pedagogical skills improved as indicated by this respondent (Teacher C):

TESSA materials have encouraged collaboration in class and as a teacher I have improved pedagogies.

A case was observed where a class had moved to the 'activities room' and the groups were seated on the floor. This made the groups immediately more cohesive and not separated by large desks. Several children had brought in artefacts and tribal dress to illustrate the lives of their ancestors/tribes. Pupils listened with great interest to each other and genuinely shared ideas in groups.

This use of school-based training may be an intervention strategy to consider for teachers' professional development in Kenya. especially in the implementation of a Competency-Based Curriculum.

Teachers Engagement with TESSA OER and challenges encountered

Since becoming involved with TESS, the whole school adopted round-table seating arrangements that made it possible for the learners to talk to each other during discussions, as opposed to the practice of learners sitting and facing the chalk board with the teacher in front of the class. In addition, the school started a library project focusing on gathering resources to support literacy and improve on the reading levels of children. The school-based, professional development programme helped teachers to develop interactive and more interesting lessons and is now enhanced by the use of TESSA OER.

A walk around the school provided indications on the use of knowledge and skills acquired through TESSA OER, which were enhanced during the school-based programme. There was now a full noticeboard in the staff room for TESSA materials. The school's workplan placed on the notice board had information on the use of TESSA and learner centered approaches. The school resource center had been improved and the teachers were using it. Furthermore, the school population had increased from 717 in 2011 to 868 pupils, with double-streamed classes of 55-60 pupils from Grades One to Eight.

The learners' performance of continuous assessment tests had also improved. The teachers agreed that their experiences with TESSA had enhanced the quality of their teaching, mutual communication and understanding of teaching practices. This learning opportunity enabled them to use TESSA approaches, challenge their own way of thinking and create a culture of peer learning. When asked whether they were still willing to support their schools in the development of this learning opportunity their answers were positive.

Challenges observed in implementing the programme

The perception of limited time was a major constraint for quality preparations. In addition, limited accessibility and network connections and a lack of effective training on use of ICT were a challenge.

However, these challenges could be addressed through continued retooling of teachers in school-based, professional development programmes and initial provision of hard copies of TESSA OER and also pro-active support of the Headteacher.

Conclusion

The results indicate that teachers were using a greater range of approaches, there was more active student involvement, and improved pupil achievement in continuous assessment tests. There was also collaborative planning among teachers taking place after school for all subjects. The teachers felt that TESSA OER presented in subject packs were more adaptable for upper primary than for lower primary. School-based professional development with mentoring and peer-support evidenced from this study has potential to improve the quality of teaching. This is possibly because of the availability TESSA OER, a supportive Headteacher, collaboration among teachers and more time allocated for planning and reflection. This study confirmed that school-based professional development has the potential to deliver significant improvements in teaching and learning. It has provided a model that worked for this school and could be extended to other schools.

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